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Mindpower

Massachusetts

The Commonwealth's Natural Resource

A Report on Public Higher Education in the Commonwealth

1997

Massachusetts Board of Higher Education

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Message from the Chancellor

June, 1997

Mr. James F. Carlin, Chairman
Massachusetts Board of Higher Education
John W. McCormack Building
One Ashburton Place
Boston, Massachusetts 02108

Dear Chairman Carlin:

I am pleased to transmit this report, *Mindpower in Massachusetts: The Commonwealth's Natural Resource*. It provides important information on students, academic programs, and finances, and discusses recent policies adopted by the Board of Higher Education to promote achievement of the system's goals.

Under your leadership the Board has acted aggressively to improve the quality of the Commonwealth's system of public higher education, to reduce student costs, and to pursue innovative avenues for achieving better and more cost effective ways for delivering programs and services. *Mindpower in Massachusetts* discusses current campus conditions and related Board policies. It highlights critical issues that will be addressed by the Board in the next several months.

This first report provides baseline information that will be used in future reports to assess the condition of public higher education in Massachusetts. These reports, mandated by the state Legislature, will measure campus performance and the effectiveness of Board policies.

As we embark upon an ambitious agenda, I am confident that the Board of Higher Education – dedicated toward successfully guiding public higher education into the next century – will accomplish its goal of making the Massachusetts system one of the nation's best. Your energy, enthusiasm, and commitment to public service are refreshing and appreciated.

Sincerely,

Stanley Z. Koplik

Stanley Z. Koplik
Chancellor

Executive Summary

The Board of Higher Education's mission is to ensure that adequately prepared Massachusetts residents have the opportunity to benefit from a quality higher education that can enrich their lives and support their contributions to the economic and social progress of the Commonwealth. To accomplish this mission, the Board of Higher Education must lead and coordinate the efforts of the Massachusetts system of public higher education. That system is comprised of three segments, including 15 community colleges, 9 state colleges, and the University of Massachusetts, with 5 campuses.

The purpose of this first report on public higher education in the Commonwealth is to provide significant information on primary areas of the system: students, academic programs, and finances. Specific data are presented in tables, charts and text. Board of Higher Education policies, recently adopted to promote achievement of the system's goals, are identified and discussed.

Future reports, mandated by the state Legislature, will be enhanced by refinement of performance measures and a benchmarking system, now being developed. Using comparative data, the Board of Higher Education will be able to measure and report on the results of its continuous efforts to improve the system.

Students

- Students earning associate's and bachelor's degrees enroll for more than the traditional two or four years. Many students are older and are parents; the average age of first-time freshmen at community colleges is 25. Students of all ages hold full-time jobs. The increase in time-to-degree is one result of these factors.
- Minority enrollment at UMass and the community colleges is representative of the diversity of the Massachusetts population and of recent high school graduates. In general, enrollment at the state colleges does not reflect this same level of diversity.
- Enrollment declines over the past decade reflect a drop in the number of high school graduates. Trend data also indicate that enrollment declines when the economy is strong.
- Enrollment is expected to increase over the next 10 years, as the number of high school graduates rises and the workplace demands more educated and highly trained employees.
- Freshmen at UMass Amherst scored 90 points above state and national norms on the SAT (Scholastic Aptitude Test). Freshmen at the other UMass campuses and at three state colleges scored from 10-50 points above these norms.
- UMass freshmen enrollment in remedial coursework is slightly lower than the national average.
- Retention rates (i.e., the percentage of freshmen who return for the sophomore year) at UMass generally are higher than the national average, while state college retention rates generally are below the national norm.

- Graduation rates at UMass and eight state colleges exceed national averages.
- Systemwide, African-American and Hispanic students are graduating in the same proportions in which they enroll.
- As tuition and fees have risen and financial aid grants, which do not have to be repaid, have failed to keep pace, low-income students' access to higher education has been adversely affected.

Academic Programs

- Over 500 degree programs are offered throughout the Commonwealth's public system of higher education. Approximately 50% of these programs are offered on only one campus.
- Over 1.1 million new and replacement jobs will be created in Massachusetts by 2005. Half of the new jobs will require one or more years of college. Two out of five new jobs will require a bachelor's degree or higher.
- More than 75% of the graduates of Massachusetts public college and university campuses live and work in the Commonwealth. They represent a key component of the Commonwealth's workforce and help to drive a strong economy.

Finances

- Today, state funding provides 49% of the revenue for public higher education. In 1988, the state provided 60%. In the early 1990s, a major shift in revenue sources occurred: the state share decreased and student tuition and fees increased.
- In fiscal year 1997, Massachusetts appropriated 4.3% of its state budget for higher education; the national average was approximately 6%.
- The system has over $300 million in legislatively authorized deferred maintenance projects. In 1995, the Legislature authorized nearly $700 million in capital projects. Annual spending for state-funded new construction, renovation, and deferred maintenance projects is capped at $50 million per year for the next five years.
- Instructional costs, at 40% of total expenditures, account for the greatest percentage of institutional expenses, followed by institutional support costs at 13%.
- On average, UMass and state college faculty salaries are competitive with faculty salaries at similar institutions nationwide.
- The salaries of senior administrators are competitive with those at peer institutions nationwide.

Board of Higher Education Policies

The Board of Higher Education recently has adopted policies intended to promote the goals of the Massachusetts public higher education system. Many of the Board's goals, policies and related actions are summarized below.

To improve the quality of Massachusetts public higher education and increase the value of a degree:

- Enhance communication and cooperative efforts with elementary and secondary schools to improve academic preparation and increase the success of first-time college students. Report annually to each high school on the freshman performance of students who graduated from that high school.
- Raise admissions standards continually. Align new admissions standards with Education Reform initiatives. Limit the number of enrolled students at UMass and the state colleges who require remedial education courses.
- Attract more and better prepared applicants to create a larger admissions pool from which to select entering freshmen students.
- Strengthen campus reputations to increase the number of accepted applicants who enroll.
- Encourage excellence through competitive Performance Improvement Program Grants and support for programs of academic distinction.

To reduce costs and improve access to Massachusetts public higher education:

- Continue to reduce tuition and fees.
- Increase retention and graduation rates.
- Encourage increases in community college enrollment and promote programs and policies that facilitate student transfers to four-year campuses.
- Implement a tuition discount program for community college graduates who have earned an associate's degree with a 3.0 grade point average and who transfer to UMass or a state college.
- Increase funding for financial aid grants, which do not need to be repaid.
- Implement a scholarship program designed to attract Massachusetts high school graduates with strong academic records to enroll in the state colleges.

To address the Commonwealth's workforce needs:

- Address the needs of older students enrolling in training and continuing education programs.
- Increase enrollment, retention, and graduation rates of students of color.
- Coordinate program offerings with projected business and industry needs, including the need for graduates with liberal arts knowledge and skills, and an international perspective.

The Board of Higher Education has embarked on an ambitious agenda to achieve its mission. With the dedication, commitment and support of the system's 29 campuses, the Executive Office, Legislature, and its residents, Massachusetts will build a public higher education system that rivals the nation's best. This annual report will track our progress toward that goal.

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Students

Massachusetts supports 29 public institutions of higher education, grouped into three segments: 15 community colleges, 9 state colleges, and the University of Massachusetts, with 5 campuses. This section focuses on the students enrolled in these institutions and addresses the following questions: Who does public higher education serve? How do students perform academically? Is public higher education affordable?

Enrollment

Nearly 170,000 full and part-time students were enrolled at Massachusetts public college and university campuses during academic year 1996-97.

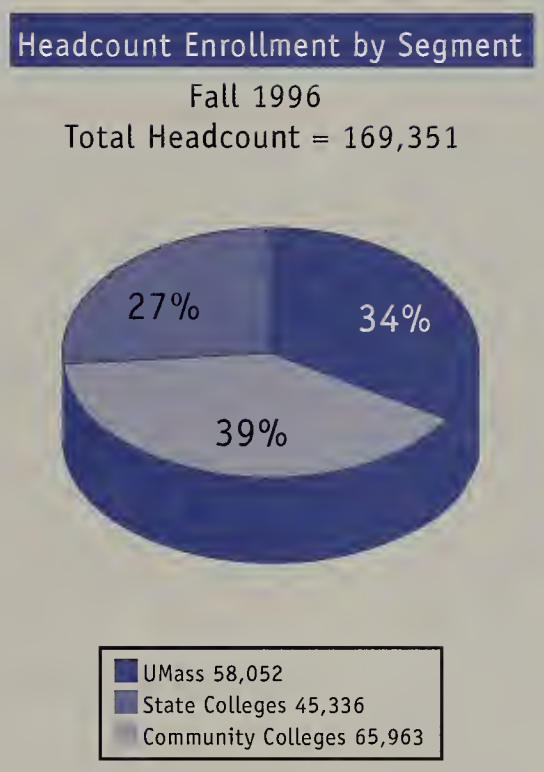
- **Most students are from Massachusetts.** Ninety percent of all students are Massachusetts residents.

- **The majority of students are female.** Fifty-seven percent of undergraduate students and 59% of graduate students are female.

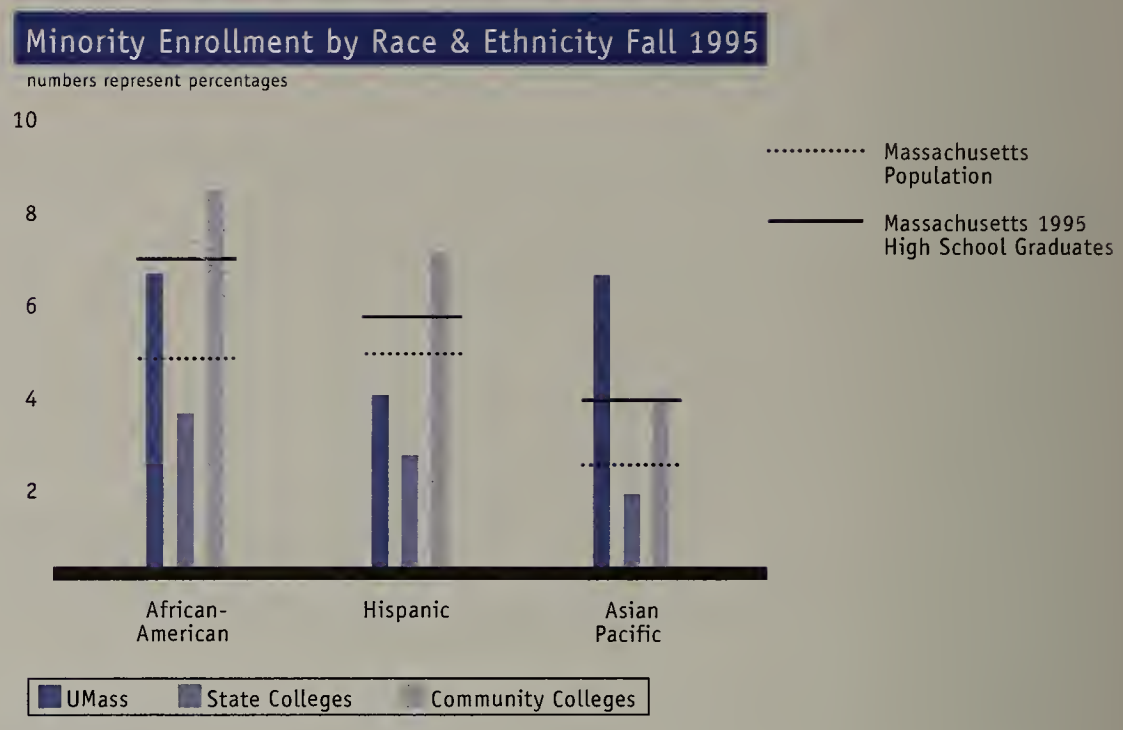
- **First-time freshmen at UMass and the state colleges typically are 18-19 years old; at UMass Boston, however, their average age is 23. At the community colleges, the average age of first-time freshmen is 25.**

- **Enrollment status reflects the population served.** Of those enrolled at UMass and the state colleges, approximately two-thirds enroll full-time. At the community colleges, which often serve older, working students with families, approximately two-thirds enroll part-time.

- **Fall 1996 full-time equivalent (FTE) student enrollment – a measurement that takes into account whether a student is enrolled full or part-time – was 114,978.** Fall 1996 FTE enrollment at UMass was 45,658; at the state colleges, 30,892; and at the community colleges, 38,428.



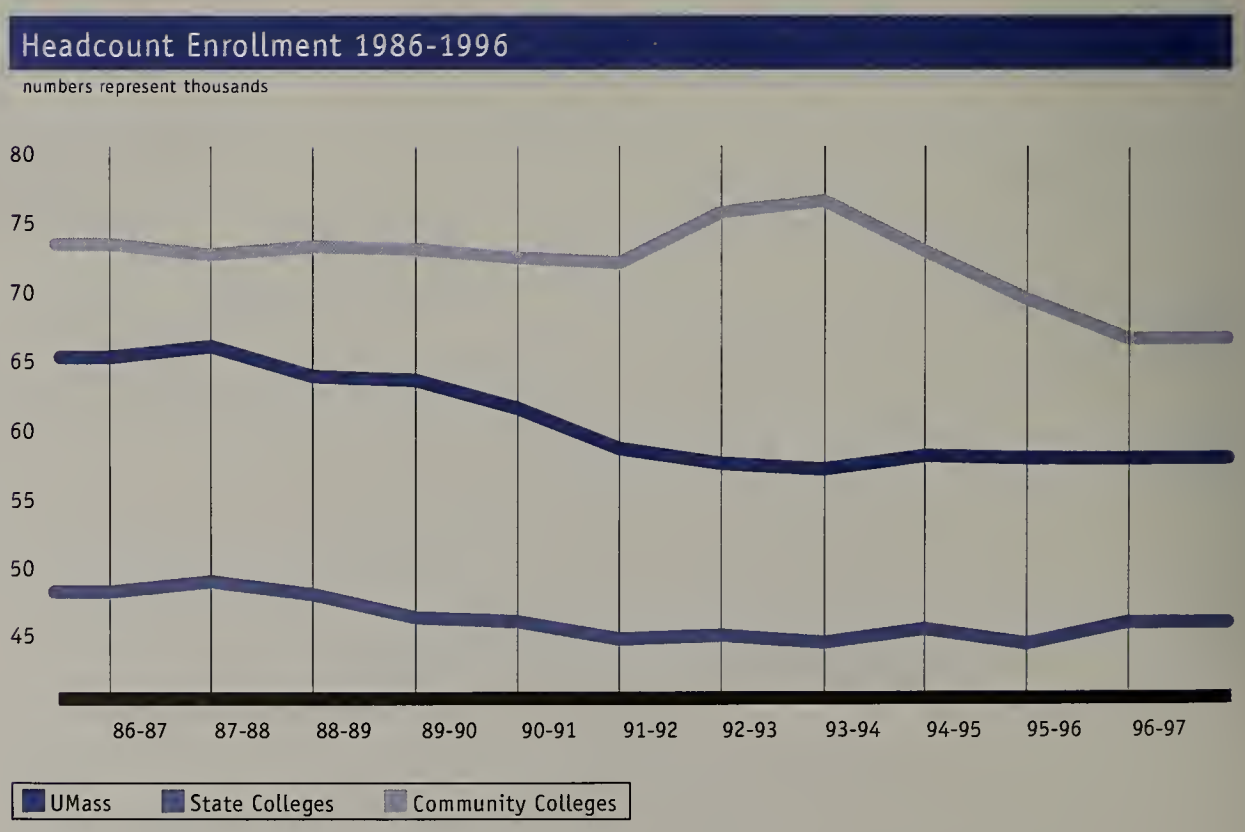
- **Minority enrollment reflects the diversity of the Massachusetts population.** The percentages of minority undergraduates enrolled at UMass and the community colleges compare favorably to those of the 1995 Massachusetts high school graduating class and the Massachusetts population.



The Tuition Advantage Program, a Board of Higher Education initiative that will start in Fall 1997, will offer Joint Admissions community college graduates with a 3.0 GPA a 33% tuition discount for two years of study at UMass or a state college.

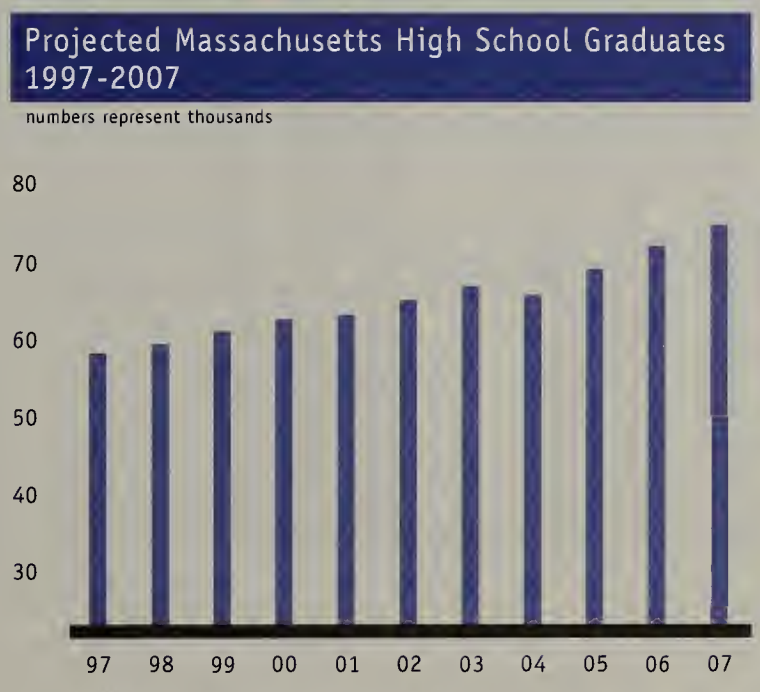
The Joint Admissions program was initiated by the community colleges and UMass. Students apply simultaneously for admission to a community college and a four-year campus. Students transfer to the four-year campus upon completion of the associate's degree with a GPA of 2.0 or higher. It is estimated that by 2002, roughly 8,000 students will have been awarded tuition discounts valued at approximately $1 million.

- **Minority undergraduate enrollment ranges from approximately 9% at the state colleges to 20% at the community colleges.** The undergraduate minority population at UMass is 17%. African-American and Hispanic students show strong enrollment at the community colleges, and lower levels of enrollment at UMass and the state colleges.



- **In the last ten years, the number of Massachusetts high school graduates dropped approximately 20%, contributing to an overall public higher education enrollment decline of 9% during that period.** Enrollment at UMass and the state colleges is strongly influenced by the number of high school graduates.

- **UMass and the state colleges can expect an increase in the demand for public higher education over the next decade.** Between 1997 and 2007, the number of high school graduates is expected to increase by nearly 30%. Massachusetts Department of Education survey data indicate that over 70% of recent Massachusetts high school graduates intend to enroll directly in college. Approximately one-half of that number intend to enroll in a public two or four-year college. The Board of Higher Education's goal is to improve the quality of the public higher education institutions, while meeting increased enrollment demand.



Source: Western Interstate Commission for Higher Education

- **Community college enrollment is expected to rise. One goal of the Board of Higher Education is to encourage students to enroll at community colleges and, where appropriate, to transfer to a state college or university campus.** Board of Higher Education policies for the four-year campuses, including higher admissions standards and enrollment limits in developmental education courses, as well as a tuition discount program for eligible community college transfer students, may result in enrollment increases at community colleges. These factors may be mitigated by a decline in the adult community college population, aged 25-40.

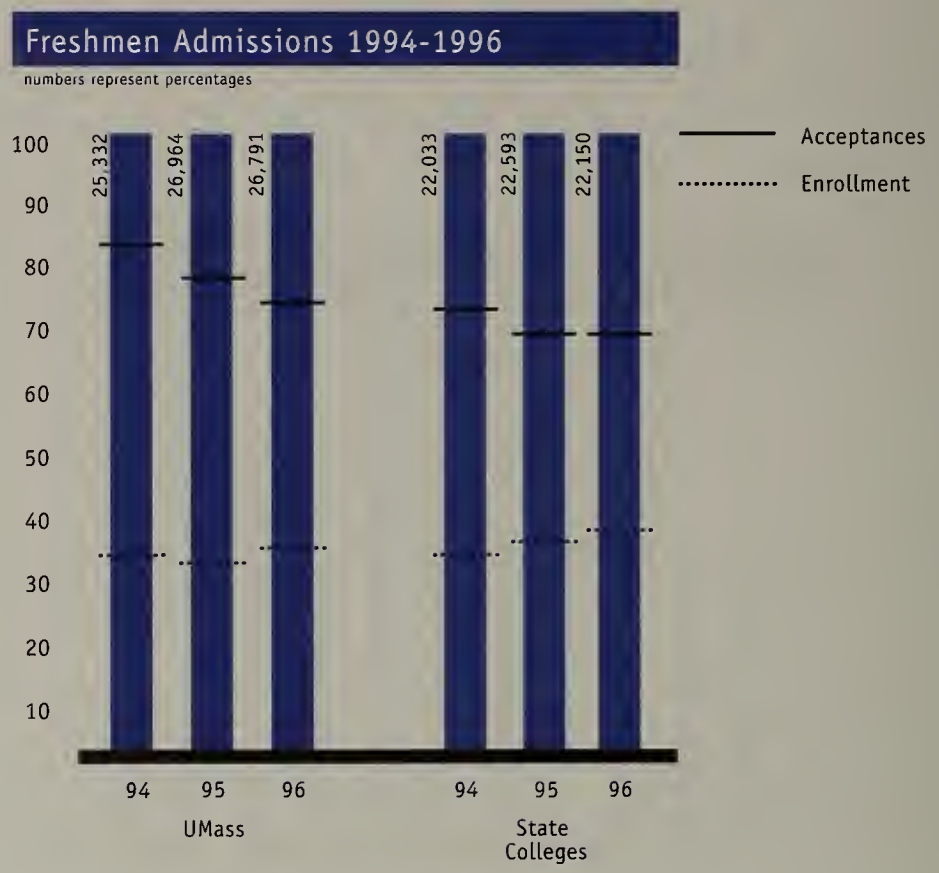
- **Demand for a more educated workforce is expected to increase enrollment at all levels.** The Massachusetts Department of Employment and Training projects that half of all new jobs created between now and 2005 will require one or more years of college.

Changes in federal and Massachusetts welfare laws account for nearly 40% of the decline in Massachusetts community college enrollment between 1994-95 and 1996-97. New laws limit enrollment for welfare recipients in vocationally related education programs to 12 months. To comply with welfare eligibility requirements, many students have withdrawn from programs that require a longer commitment.

Entering Student Preparation

The Commonwealth's community colleges help to ensure access to higher education through their open admissions policies: any Massachusetts high school graduate or GED recipient may be admitted to a community college. Applicants to UMass and the state colleges are admitted through a competitive application process. It is the Board of Higher Education's objective to make this process more competitive as we move into the 21st century.

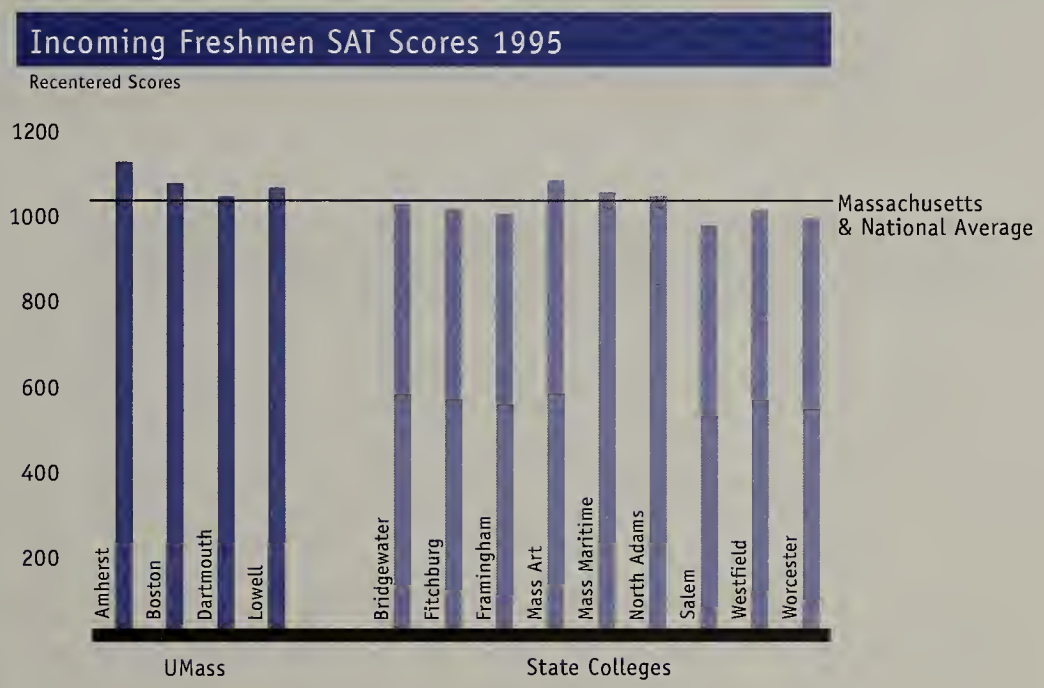
Number of applications, acceptances and yield – the percentage of accepted students who enroll – are among the best quantitative measures of the reputation, selectivity and attractiveness of institutions to prospective students.



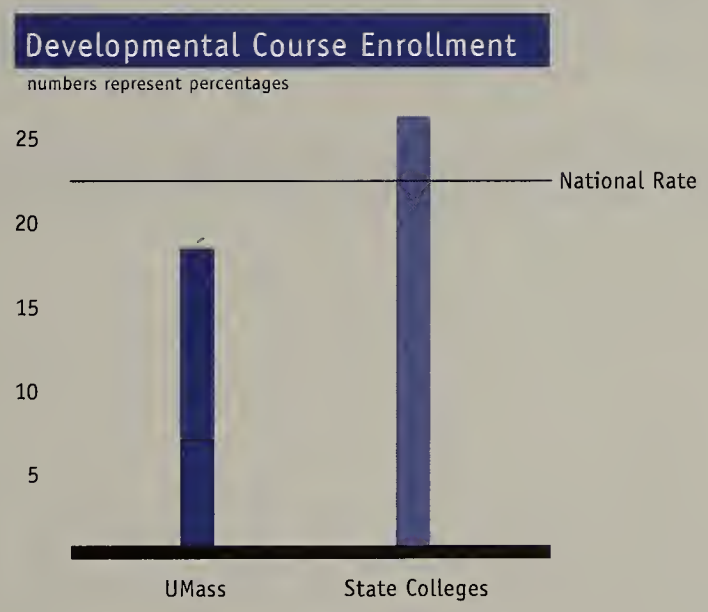
- **UMass and the state colleges are becoming more selective.** The percentage of applicants admitted to UMass has fallen from 80% to 73% since 1994. The state colleges also have become more selective over the last three years, as the percentage of applicants admitted has fallen from 72% to 68%.

- **The percentage of accepted students who enroll has risen slightly since** 1994. Yield rates in 1996 were 34% and 37%, respectively, for UMass and the state colleges.

- **Entering freshmen at UMass campuses and three state colleges scored on average above the national and state norms on the SAT (Scholastic Aptitude Test).** Entering freshmen at another three state college campuses scored within twenty points of those averages.



- **Eighteen percent of UMass and 26% of state college freshmen enrolled in developmental reading, writing or math courses.** The vast majority of these students enrolled in one such course. Nationally, 22% of freshmen at public four-year institutions enroll in developmental courses.



The Board of Higher Education has mandated reductions in the level of developmental instruction offered by UMass and the state colleges. By September 1997, the four-year campuses will enroll no more than 10% of first-time freshmen in developmental courses; that figure will be reduced to 5% by September 1998.

- **Two of the Board's priorities between now and 2000 are to raise admissions standards continually and to promote improved academic preparation of students entering public higher education in the Commonwealth.**

- **UMass and the state colleges have raised admissions standards, based upon minimum criteria adopted by the Board of Higher Education.** In Fall 1997, the new admissions standards require at least 16 college preparatory courses distributed across a core curriculum, with a minimum grade point average (GPA) in all college preparatory courses as follows:

New Admissions Standards
High School GPA Requirements

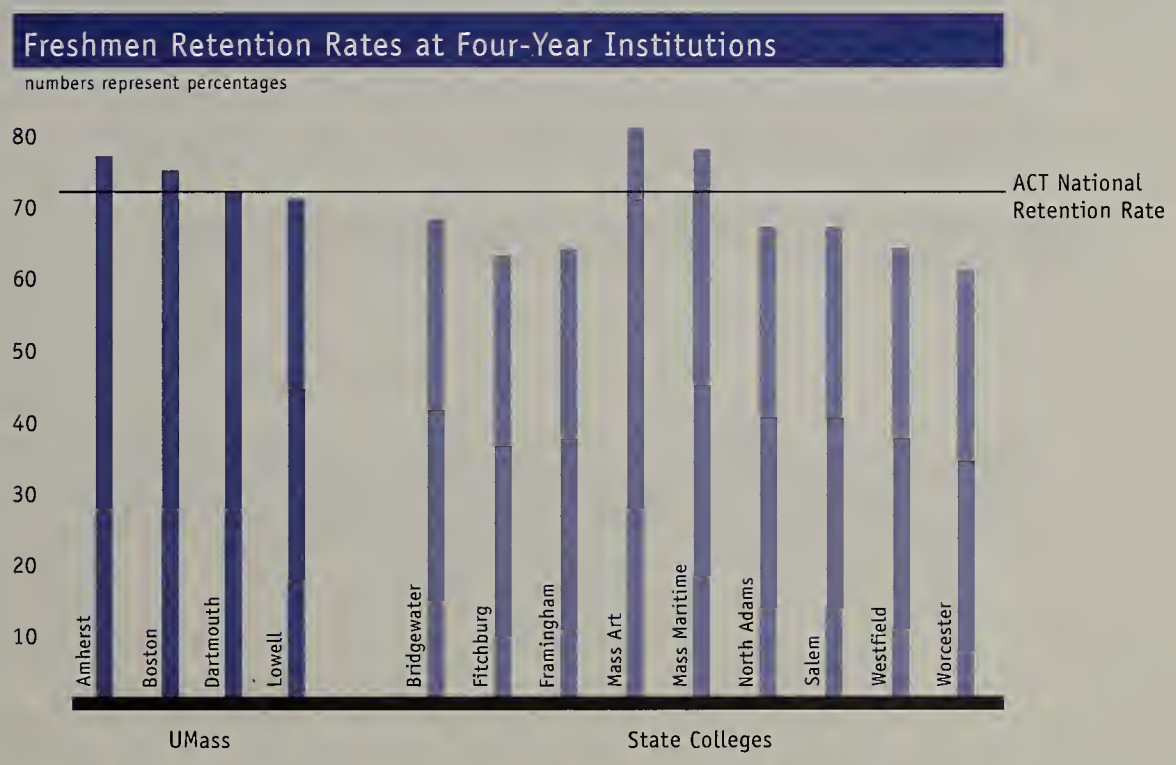
Effective Date	State College GPA	UMass GPA
Fall 1997	2.60	2.75
Fall 1998	2.70	3.00

Applicants also must take the SAT I or ACT test. Minimum scores based on a sliding scale linking test scores and the high school GPA must be achieved when an applicant does not meet the minimum GPA requirement.

- **To strengthen further the academic quality of the student body, state college presidents recently created a State College Commonwealth Scholars Program, approved by the Board of Higher Education and effective Fall 1997.** Each state college will award up to five full four-year scholarships to top Massachusetts high school graduates. Scholars must meet high academic standards to receive the scholarships, and maintain a 3.3 GPA to be eligible for annual renewal. UMass initiated its similar University Commonwealth Scholars Program in 1995, and will begin a University Scholars Program in Fall 1997.

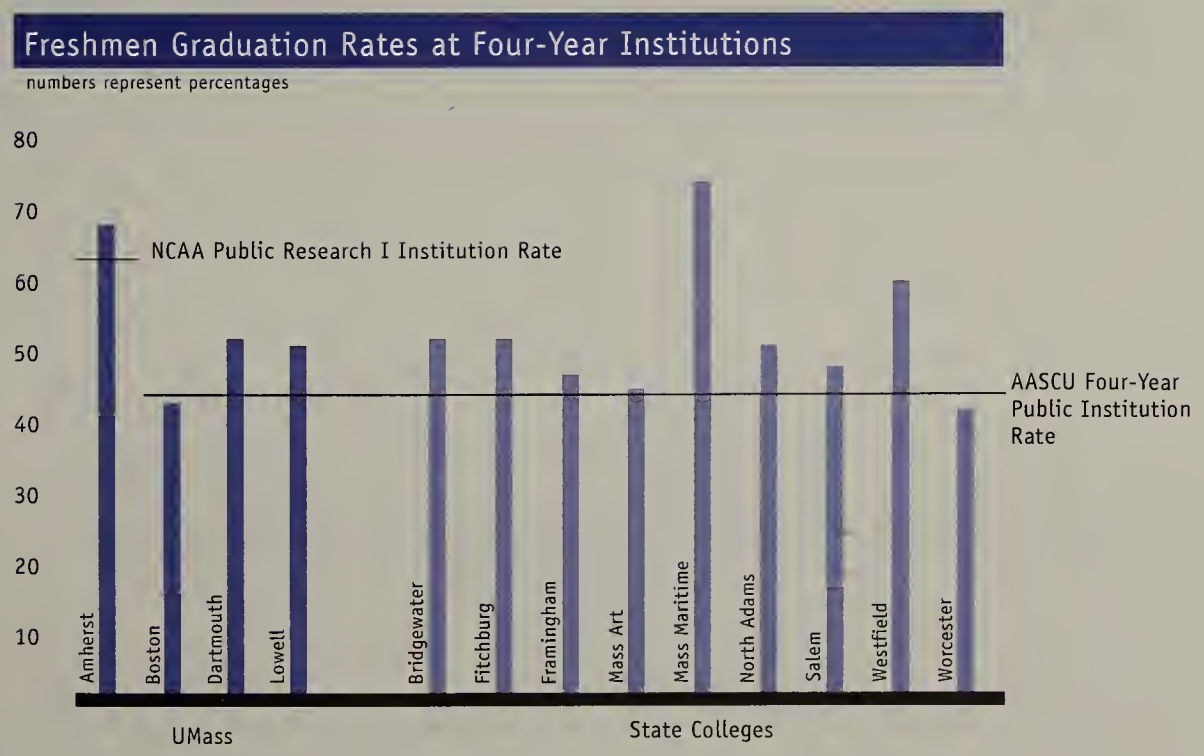
Performance

- **UMass retention rates compare favorably with the national average.** The national retention rate at public four-year colleges and universities for students entering in Fall 1994 was 71%. UMass campuses' retention rates were 70% or higher; state college rates ranged from 60% to 80% and, in two cases, exceeded the national average.



Retention is the rate at which full-time freshmen return to continue their education after one year of study. A one-year return rate is a good indicator of success because over 50% of college attrition occurs within the first year.

- **UMass and state college graduation rates exceed national averages.** The American Association of State Colleges and Universities (AASCU) reports a 43% 1994 graduation rate for students who entered four-year public institutions as freshmen six years earlier. All but one UMass campus and one state college exceed that rate. The NCAA rate for comprehensive public research institutions, a group into which UMass Amherst falls, is 62%. The Amherst campus' corresponding graduation rate is 67%, 5 points higher than the NCAA rate.

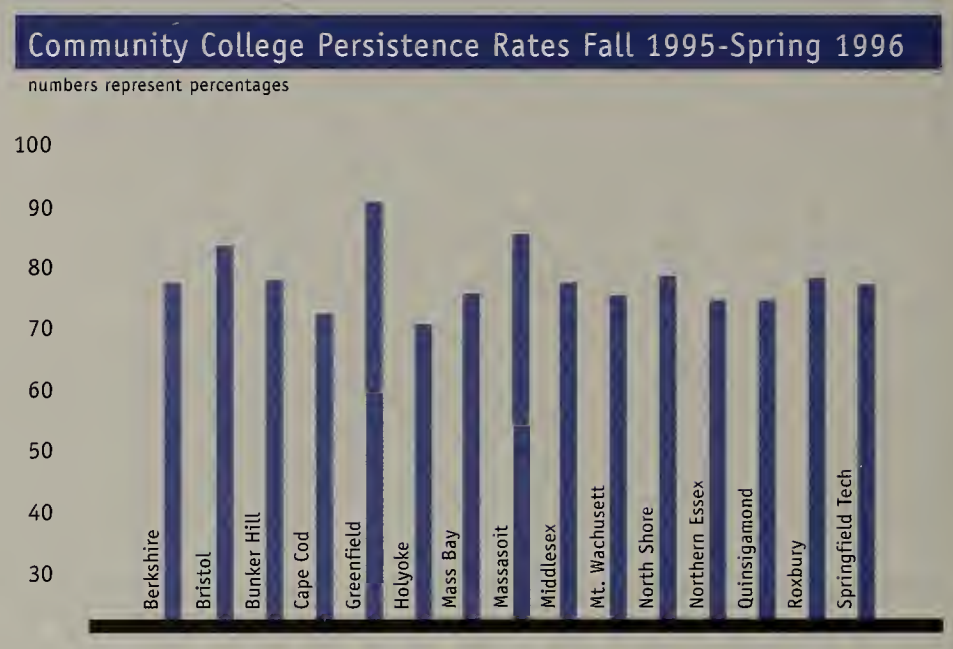


Graduation is the most accepted criterion of success at the four-year college level. Graduation rates are based upon completion of a degree within six years of initial full-time enrollment. This time frame acknowledges that today's student typically does not enroll full-time for four consecutive years due to financial constraints, job, and/or family responsibilities.

- **Variations in graduation rates reflect differences in campus student bodies and missions.** For example, UMass Boston's graduation rate of 42% for those who started there as full-time freshmen measures the success of just 15% of its entering students: the majority of students on the Boston campus are older than traditional-age college students, and transfer to UMass Boston with credits earned at other institutions. The graduation rate of these transfer students is 70%. The highest graduation rate, 73% at the Massachusetts Maritime Academy, reflects the specialized curriculum and demand for new graduates.

Community College Student Persistence Rates

Community college student persistence is defined as the percentage of students who return after completing one semester. Persistence is an appropriate measure for community colleges, given the large number of students who enroll for short periods in focused skills training courses, and who interrupt their studies to work.



- More than 75% of full-time freshmen enrolled at community colleges in Fall 1995 returned in Spring 1996.

Affordability

Tuition and Fees

The cost of attending Massachusetts public colleges and universities is among the highest in the nation. In 1996-97 Massachusetts ranked 4th highest in undergraduate resident tuition and fees for flagship universities, 9th among four-year state colleges, and 2nd among community colleges.

National Ranking
Massachusetts Public Tuition & Fees

	1994-95	1995-96	1996-97
UMass Amherst	2	3	4
State Colleges	5	8	9
Community Colleges	1	2	2

Source: State of Washington's Higher Education Coordinating Board

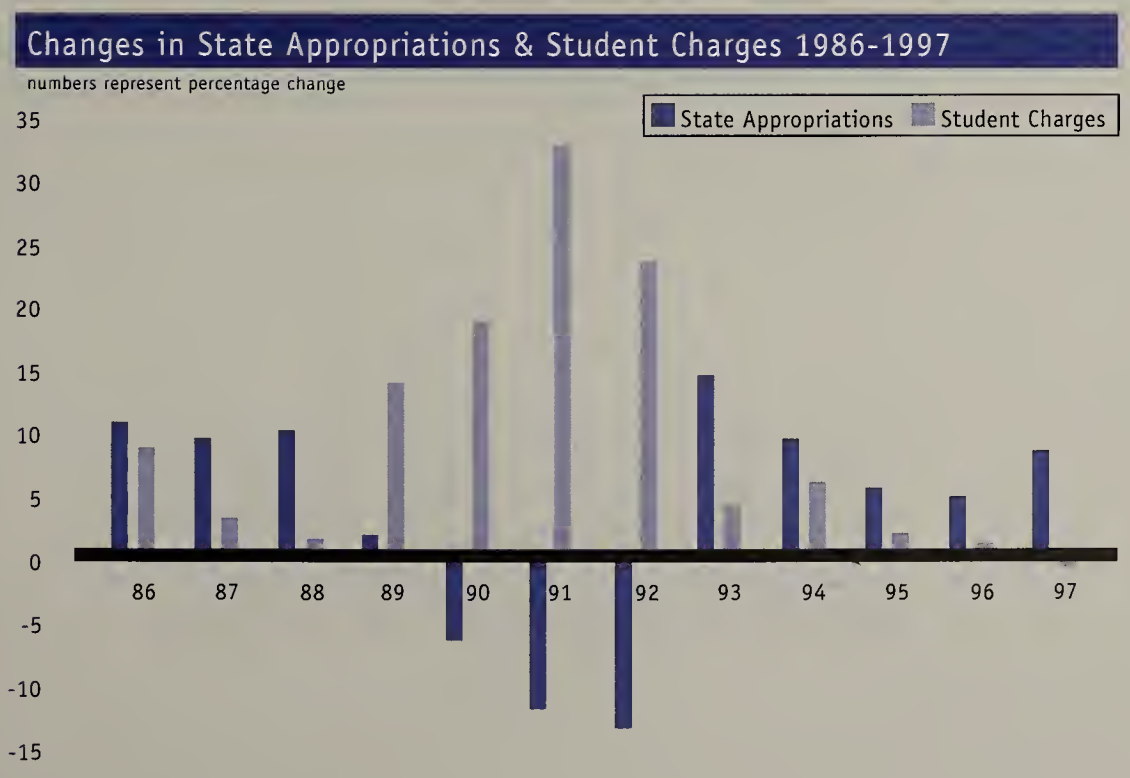
Massachusetts Tuition & Fees 1996-1997
average per segment

	Tuition	Fees	Tuition & Fees
UMass	$2,010	$2,894	$4,904
State Colleges	$1,338	$1,925	$3,263
Community Colleges	$1,080	$1,450	$2,530

Student fee increases have outpaced tuition increases. Fees, which are established by the campuses, currently are higher than tuition at a majority of campuses.

The Board of Higher Education reduced tuition for Fall 1996 at UMass and the state colleges by 5%, and by 10% at the community colleges. The Board reduced tuition by another 5% on all campuses for Fall 1997. It is the goal of the Board of Higher Education to reduce tuition at least 5% per year for the next three years.

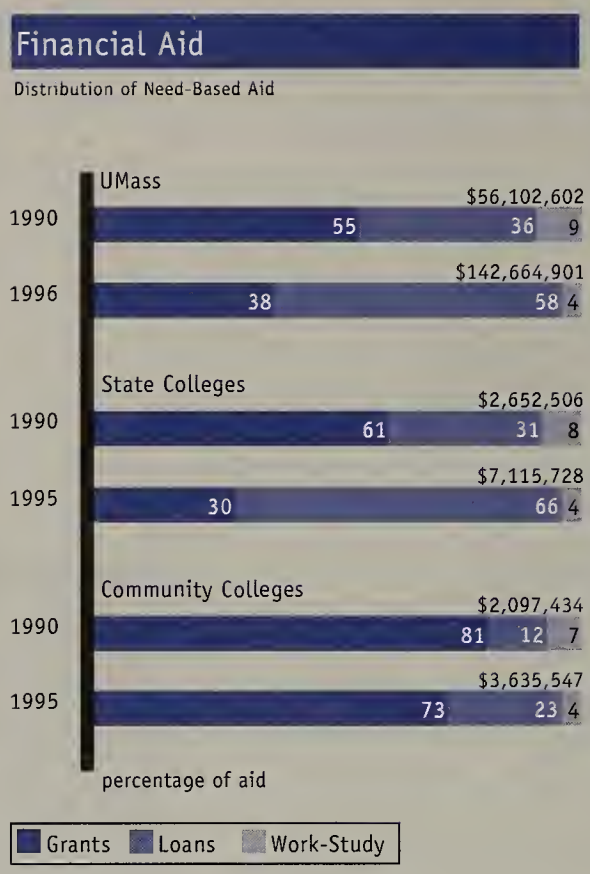
- **Student charges rose significantly between 1988 and 1992 as a result of cuts in state support for public higher education in Massachusetts.** State appropriations declined by 28% during this period. Although state appropriations have recovered in recent years from their low point in 1992, student charges continued to rise until this year. Recent tuition cuts are meant to offset the financial burden imposed on students between the 1988-89 and 1991-92 academic years.



Financial Aid

The majority of students cannot afford to attend public colleges and universities without some form of aid (e.g., grants, loans, or work study jobs). An important factor in assessing the affordability of public higher education is the level of financial aid available to students.

- **While the amount of financial aid awarded has risen steadily, increases largely have been in the form of loans, which must be repaid, rather than in grants, which do not need to be repaid.**



- **Systemwide, tuition and fees rose 83% between the 1989-90 and 1994-95 academic years. At the same time, financial aid in the form of grants and work-study rose 65%, and loans rose 315%.**

- **The distribution of financial aid has shifted dramatically from grants to loans as a result of changes in federal aid programs.** In 1990, grants – which do not have to be repaid – were the dominant form of need-based aid awarded. In 1995, student loans – which must be repaid – far exceeded grants.

- **The proportion of college costs covered by Pell Grants has fallen significantly.** Pell Grants – federal grants intended to help financially needy students – fell from equaling 55% of the cost of attending a public four-year institution in 1985; to 45% of the cost in 1990; and to 33% of the cost in 1995.

- **At UMass, for the academic year 1995-96, 58% of undergraduate students demonstrated financial need.** Of those students, more than 93% received aid, either need or non-need based (e.g., an academic or athletic scholarship). The previous year, at the state and community colleges, 83% and 72%, respectively, of students who demonstrated need received need-based aid.

Distributing Costs

Quality public higher education depends upon a partnership between the Commonwealth, which benefits in many ways from the education of its residents, and students, who receive direct benefits from their educational experiences.

The Board of Higher Education has recommended that the cost of education be shared as follows: by 2002, pending Legislative funding, community college students should pay 25%, and state college and UMass students should pay 33% of the cost of their education. Non-resident students will pay tuition and fees equal to 100% of their cost of education.

- **In 1995-96, UMass students paid on average 35% of their cost of education, as calculated by the Board's funding formula. Community and state college students paid on average 34% and 39%, respectively.** The largest gap between current and target shares is 9%, for community college students. Thus, they should experience the greatest reduction in tuition and fees over time.

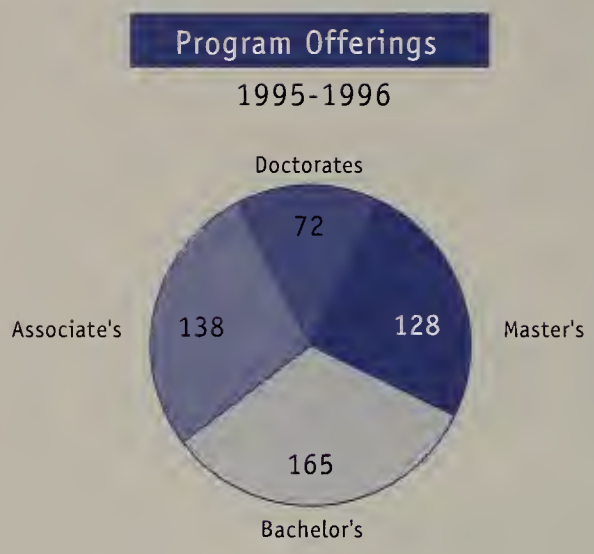
Cost of Education per Student
Student & State Shares 1995-1996

numbers represent thousands

In 1994, according to U.S. Census Bureau data, students from low-income families (below $22,000) were ten times less likely to obtain college degrees than students from high-income families (above $68,000). Enhancement of financial aid programs, in conjunction with fair distribution of the cost of education, will help low-income students gain access to higher education.

Academic Programs

Massachusetts' public higher education system offers students a wide array of academic degree programs. Throughout history, the system's campuses have provided the Commonwealth with an educated and trained workforce, fueling our economy's growth. This section describes the academic programs offered, chosen and completed; the Board's program review and approval policies; and workforce needs in Massachusetts.

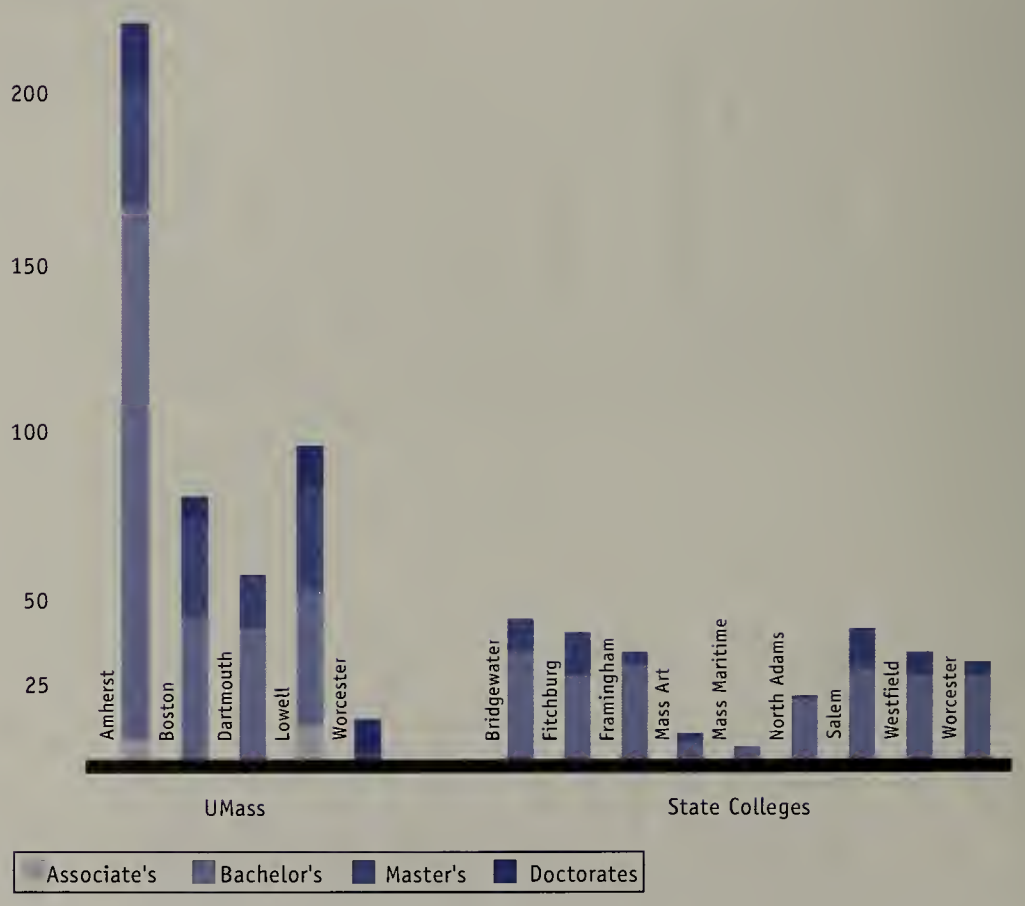


Degree Program Offerings

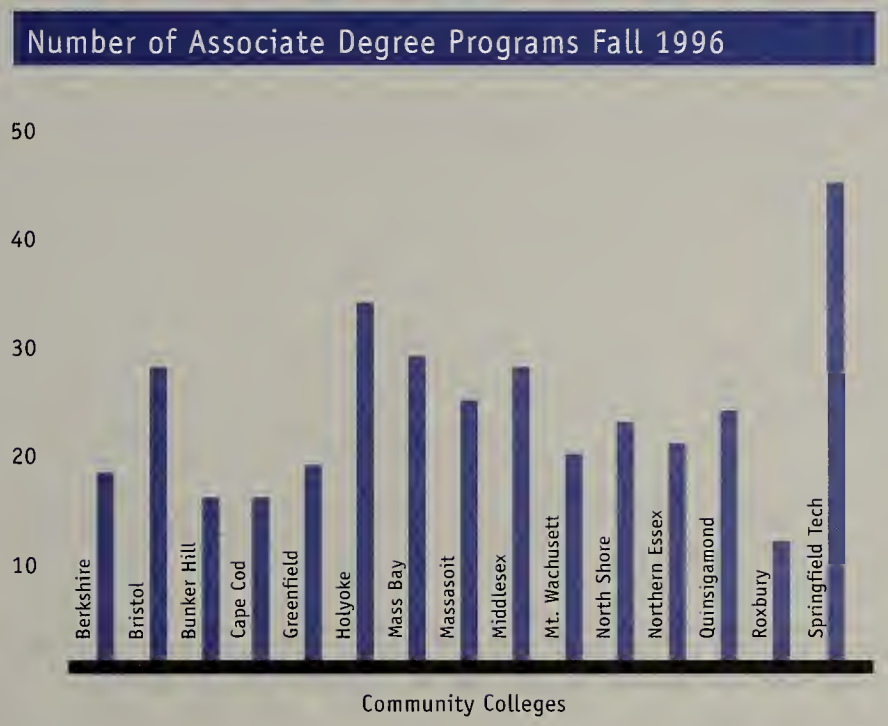
- **Students may choose from over 500 programs of study at the associate's, bachelor's, master's and doctoral degree levels throughout the Commonwealth's public higher education system.**

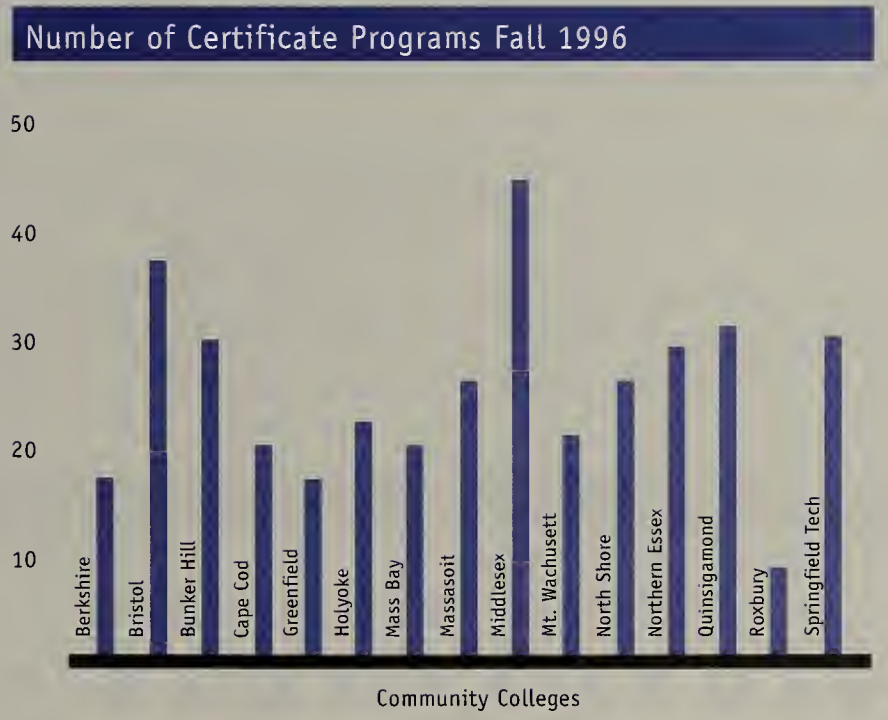
- **Approximately 50% of degree programs are offered on just one campus.** The following graph illustrates the number of degree programs offered at each state college and UMass campus, including the UMass Medical Center at Worcester, which offers solely advanced degrees in the health field.

Number of Programs by Level of Degree

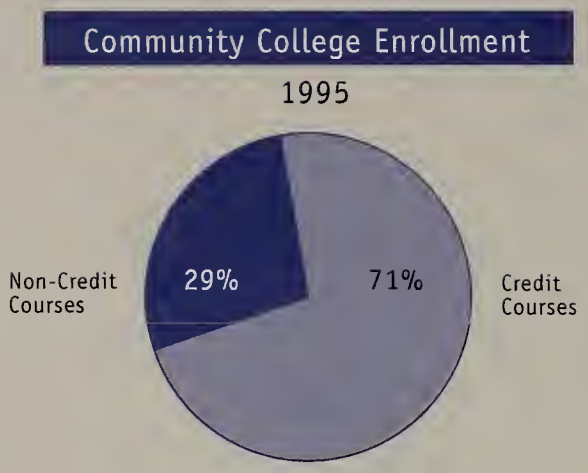


- **Community colleges offer associate's (two-year) degrees, and certificate programs.** Certificate programs range from a few weeks to two years in length, and generally focus on short-term training or retraining for the workforce, or on lifelong learning topics.





Non-Credit Activities



All campuses – including UMass and the state and community colleges – offer non-credit courses and programs. Such activities include training courses for local businesses and industries; learning skills and enrichment programs; and high school equivalency courses and examinations.

- **Students enrolled in non-credit courses comprise over one-quarter of community college enrollment.** Approximately 28,000 students are served through non-credit activities, greatly enhancing the regional impact of community colleges.

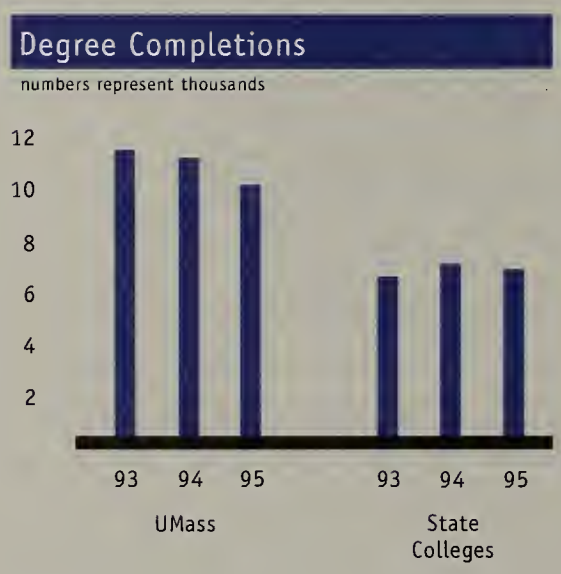
Degrees Awarded

- **The number of degrees awarded by UMass has declined slightly since 1993, while those awarded by the state colleges have risen.**

- **The number of degrees earned by women reflects their enrollment levels.** In Fall 1989, women comprised 57% of all students; six years later, in Spring 1995, women earned 57% of all degrees awarded.

- **In contrast with national data showing lower graduation rates for African-American and Hispanic students than for White students, African-American and Hispanic students enrolled in Massachusetts public higher education institutions graduate in the same proportion in which they enroll.** In Fall 1989, African-American and Hispanic students comprised 3.6% and 2.4% of all students, respectively; six years later, in Spring 1995, they earned 3.6% and 2.2% of all degrees awarded.

- **The number of degrees awarded by the community colleges has declined slightly since 1993, while the number of certificates has remained stable.** Certificates comprise approximately 15% of the completion awards granted by the community colleges.



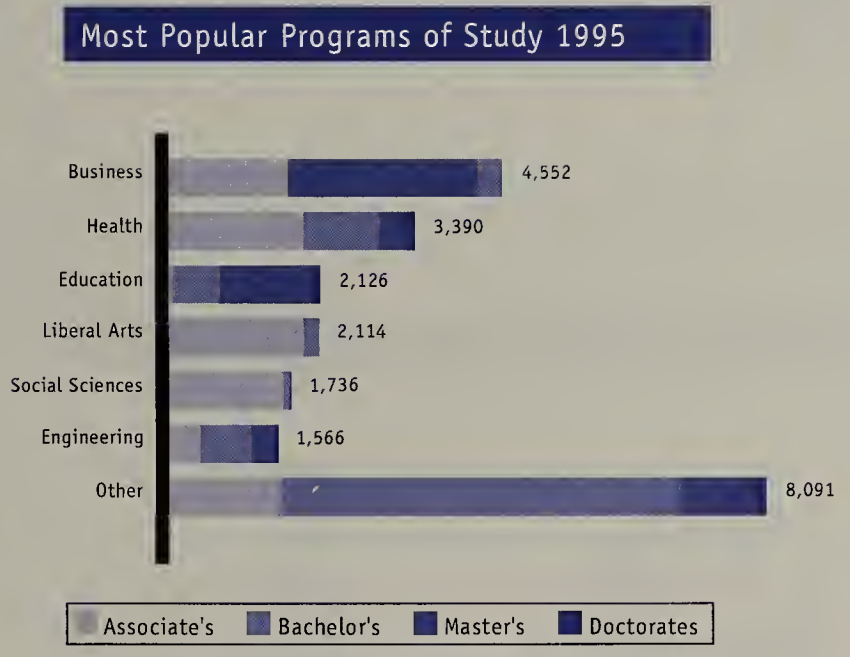
The Board in 1996 initiated a review of program productivity designed to focus institutional missions and increase overall productivity. Review is based upon thresholds reflecting the average number of program graduates over a three-year period.

Program Productivity Thresholds Three-Year Average	
Associate's or Bachelor's Degree Programs	5 graduates
Master's Degree Programs	5 graduates
Doctoral Degree Programs	3 graduates

- **Fifty-three programs (5% of all programs offered) have been identified as falling below minimum productivity thresholds.** Institutions must either drop these programs or show cause as to why they should be continued.

Programs of Study

- **Sixty percent of the nearly 24,000 degrees awarded throughout the system at all degree levels in 1995 were in six fields: business, health, education, liberal arts, social sciences and engineering.**



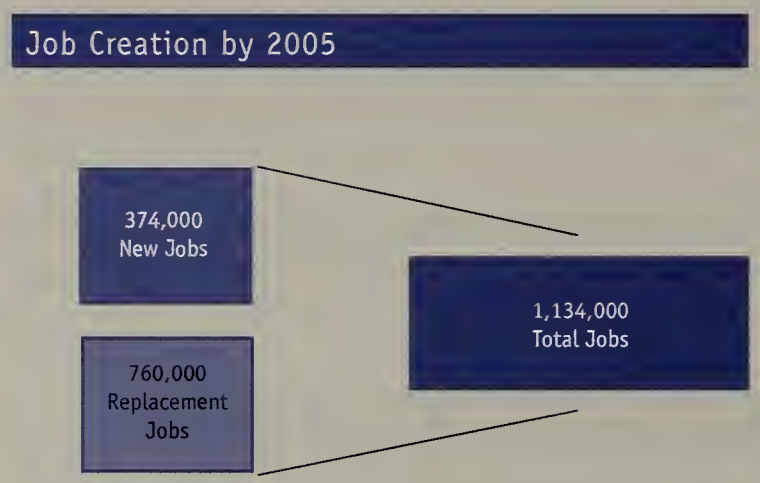
The Board of Higher Education adopted, in 1996, a policy requiring campuses to eliminate an existing program when proposing a new academic program. The program being eliminated must have resources comparable to the program being requested.

Workforce Needs in Massachusetts

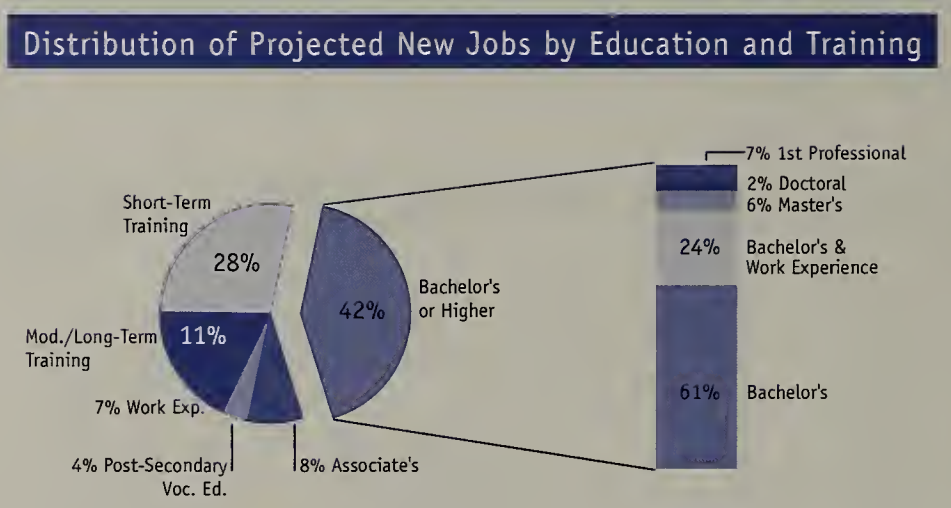
Massachusetts' public campuses serve a key role in the Commonwealth's economic development by providing an educated and trained workforce, and through collaborations with business and industry. All campuses have developed alliances with local and regional business and industry to provide employee training and development opportunities, as well as research support.

The employment outlook for Massachusetts as it approaches the next century is promising, according to the Department of Employment and Training's latest projections (1994-2005):

- **By 2005, over 1.1 million new and replacement jobs will be created.**



- **Half of all projected new jobs will require one or more years of college.** Two out of five new jobs will require a bachelor's degree or higher.



Source: Mass. Dept. of Education and Training

The North Adams Office of Lifelong Learning has developed a partnership with Lockheed Martin, a major employer in Berkshire county. Through Lockheed's Evening Institute, North Adams offers a minimum of 15 courses per year in conjunction with the American Management Association. Instructors are drawn from local business and industry.

NYNEX recently awarded an $8 million training grant to eight New England colleges, including five Massachusetts community colleges. Springfield Technical Community College is the lead college for the degree program, which provides the latest telecommunications technology training to current and future workers in the telecommunications industry.

The Department of Defense has contracted with the Science Applications International Corporation (SAIC) Team, which includes the five UMass campuses and the 15 community colleges, to manage its Financial Management Training and Education Institute in Southbridge. The $46 million project represents the largest outreach effort and training contract in the history of UMass and the community colleges.

- **By 2005, the greatest demand for associate-level graduates will be in the areas of health, education, and electronic technology.**

- **The greatest demand for baccalaureate-level graduates will be in education, accounting, and computer-related areas.**

The supply of bachelor's degree holders must rise rapidly to meet workforce demands projected for the year 2010 (Massachusetts Institute for Social and Economic Research, 1995). Jobs requiring at least a bachelor's degree are expected to increase over 50% by then. Only if supply continues to rise will there be sufficient numbers of qualified persons in the workforce. Given projected increases in minority and low-income populations, greater access and completion rates for these populations are critical.

- **MASS*NET, the Massachusetts Community College Workforce Training Network, connects business and industry to the combined resources of the 15 Massachusetts community colleges.** MASS*NET offers needs-assessment services, and designs and delivers workforce development training either on-site or on a community college campus.

- **The Massachusetts Institute for Social and Economic Research (MISER) at UMass Amherst is implementing a Placement Advancement System (PAS) for the MassJobs Council. By tracking graduates of higher education programs and completers of training courses over time, PAS will report on the creation of the Massachusetts workforce.** Such information will help colleges and policy makers adapt to fulfill the Commonwealth's workforce needs. Students will gain by learning about which fields offer the best opportunities and highest placement and earnings rates.

The success of efforts to educate Massachusetts' residents will determine if the Commonwealth's economy will falter under the burden of an under-qualified workforce, or whether it will thrive as more and more residents are reached by a public higher education system that is responsive to both their needs and those of the future economy.

Graduates of public institutions in Massachusetts are key components of the Commonwealth's workforce. Approximately 80-85% of all state and community college alumni live and work in Massachusetts. UMass data show that approximately 75% of its employed 1993 baccalaureate degree recipients work in Massachusetts, unlike graduates of many of the Commonwealth's well-known private institutions.

Finances

Nearly two billion dollars ($2,000,000,000) will be spent on public higher education in Massachusetts during the 1996-97 academic year. Direct state appropriations for higher education in fiscal year 1997 equaled $802 million, representing 4.3% of the Commonwealth's total budget. The remaining $1.2 billion is derived from fees, grants, gifts, clinical revenues, and income from auxiliary enterprises. This section describes the financing of public higher education by reviewing funding sources, including state appropriations and institutional fundraising; and major categories of expenditures, including faculty and administrator salaries.

Revenues by Source

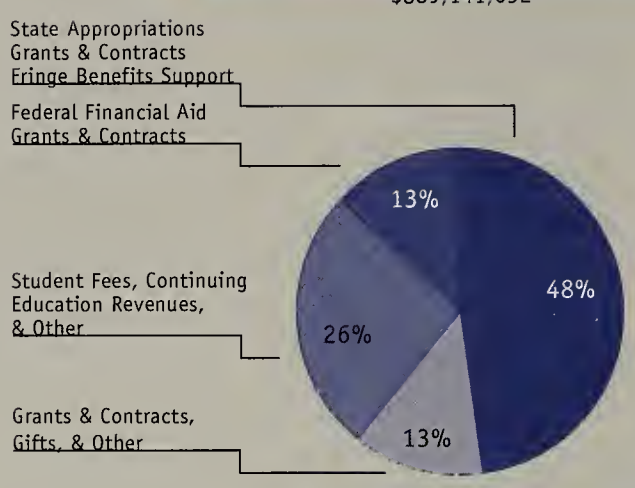
Institutional support stems from four major sources: state support; student tuition and fees; federal aid; and other sources, including private gifts and endowment income.

1996 Institutional Revenues

Fiscal Year Operating Budgets
Excluding Clinical Operations and Auxiliary Enterprises

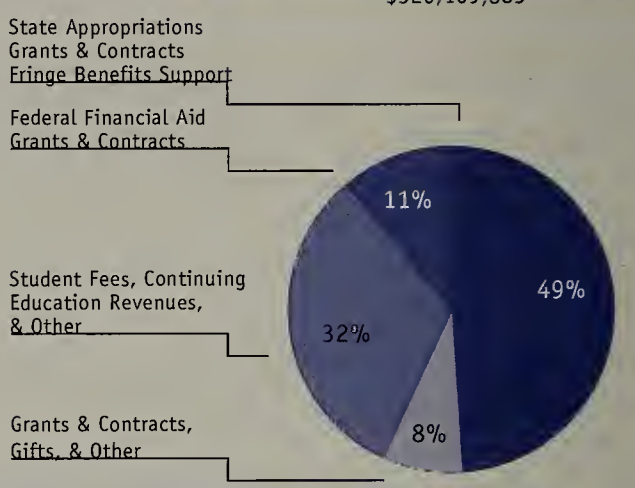
UMass

$889,141,052



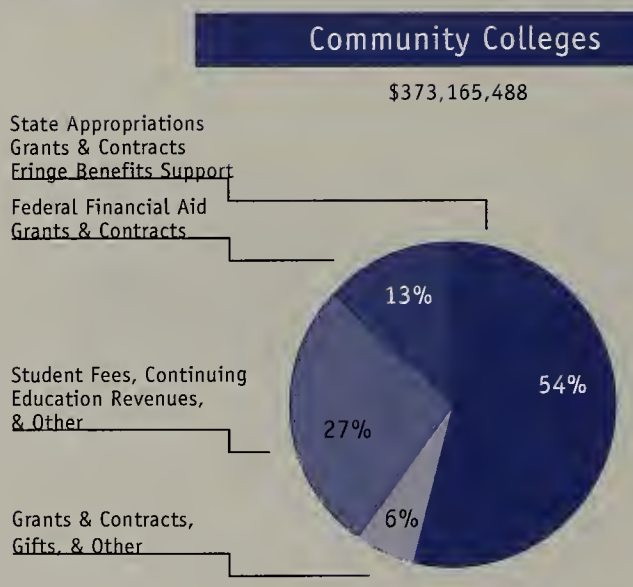
State Colleges

$326,109,885



Community Colleges

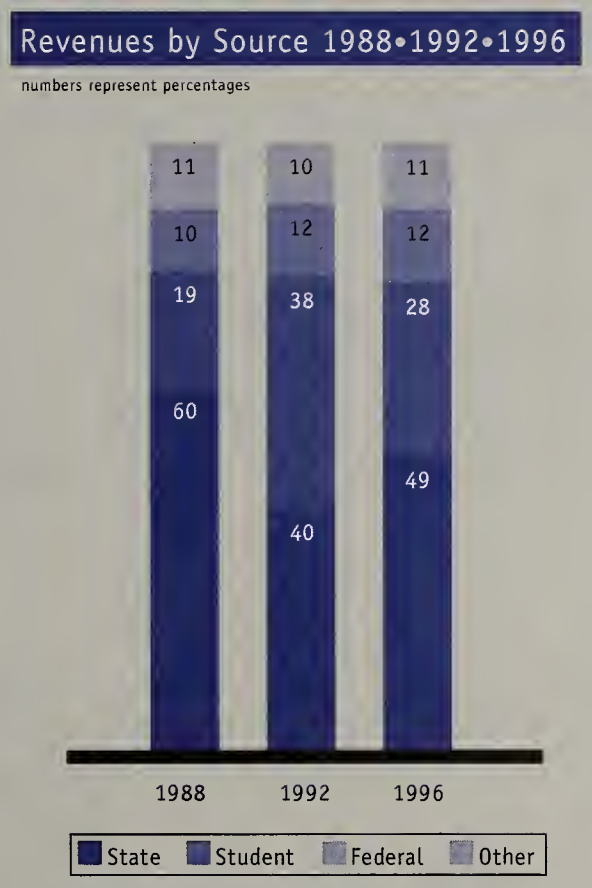
$373,165,488



Revenues from clinical operations and auxiliary enterprises (excluded from these pie charts due to their variability from year-to-year) are significant for UMass: when included, total UMass revenues for fiscal year 1996 equaled $1,332,718,445. Clinical revenues are generated by UMass Medical Center's hospital and group practice operations; auxiliary revenues stem from such activities as dormitories and bookstores. When all revenues are included for all segments, total system revenues in fiscal year 1996 were $1,996,889,336.

- **State support accounts for approximately 49% of revenues for Massachusetts public higher education.**

From fiscal year 1988 to fiscal year 1996, a major shift in responsibility for funding campus operations occurred. Over this time, the share of revenues available for institutional operations from students increased, while the state share decreased.



- State revenues declined from a high of 60% in 1988 to 40% in 1992, and have since increased to 49% in 1996.
- Student revenues from tuition and fees rose from 19% in 1988 to 38% in 1992, and have since decreased to 28% of total system revenues in 1996.

In November 1996, the Board of Higher Education approved a System Financing Policy for developing its budget request. The policy links state appropriations, student charges, and required institutional resources. It determines the cost of education, appropriate levels of institutional expenditures, and the price constituents pay in support of public higher education.

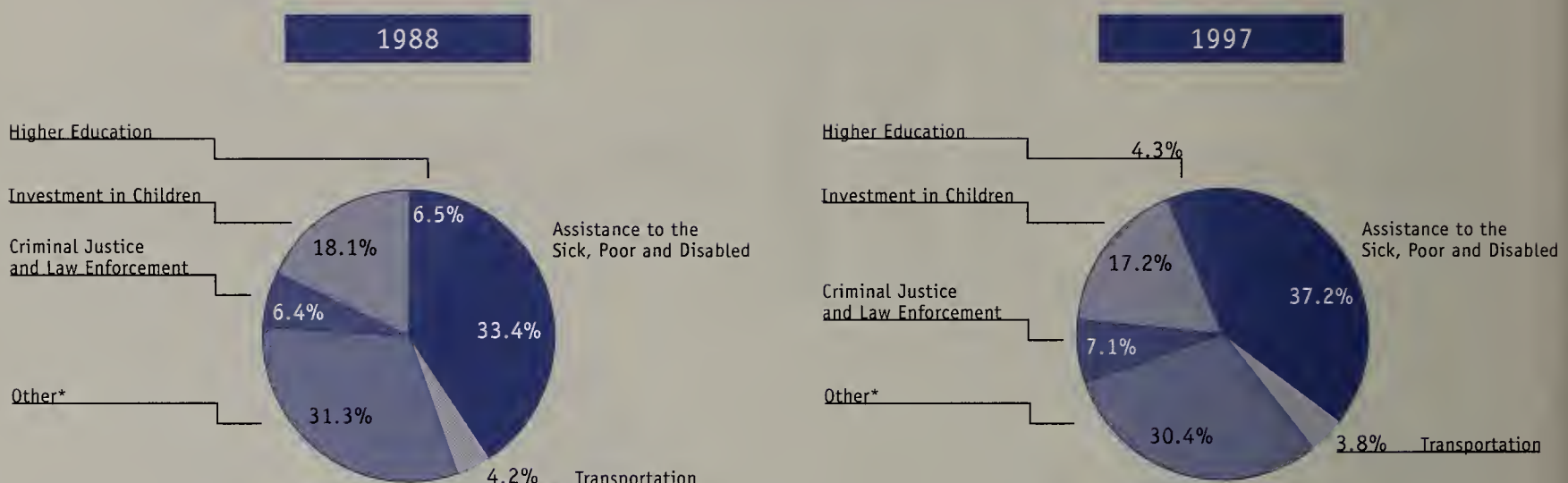
The Board's System Financing Policy incorporates a cost of education formula, which identifies an appropriate "foundation budget" for each institution given enrollment, instructional programs, and physical plant profile. The formula apportions these costs to the Commonwealth (through the state appropriation request) and to students and their families (through tuition and fee rates). The foundation budget is not based on the amount campuses spent during the preceding fiscal year.

State Appropriations

- **Massachusetts allocates a comparatively small share of state funds to public higher education.** In 1995-96, Massachusetts' total state appropriation for higher education as a percentage of the state budget placed it 47th among the 50 states.

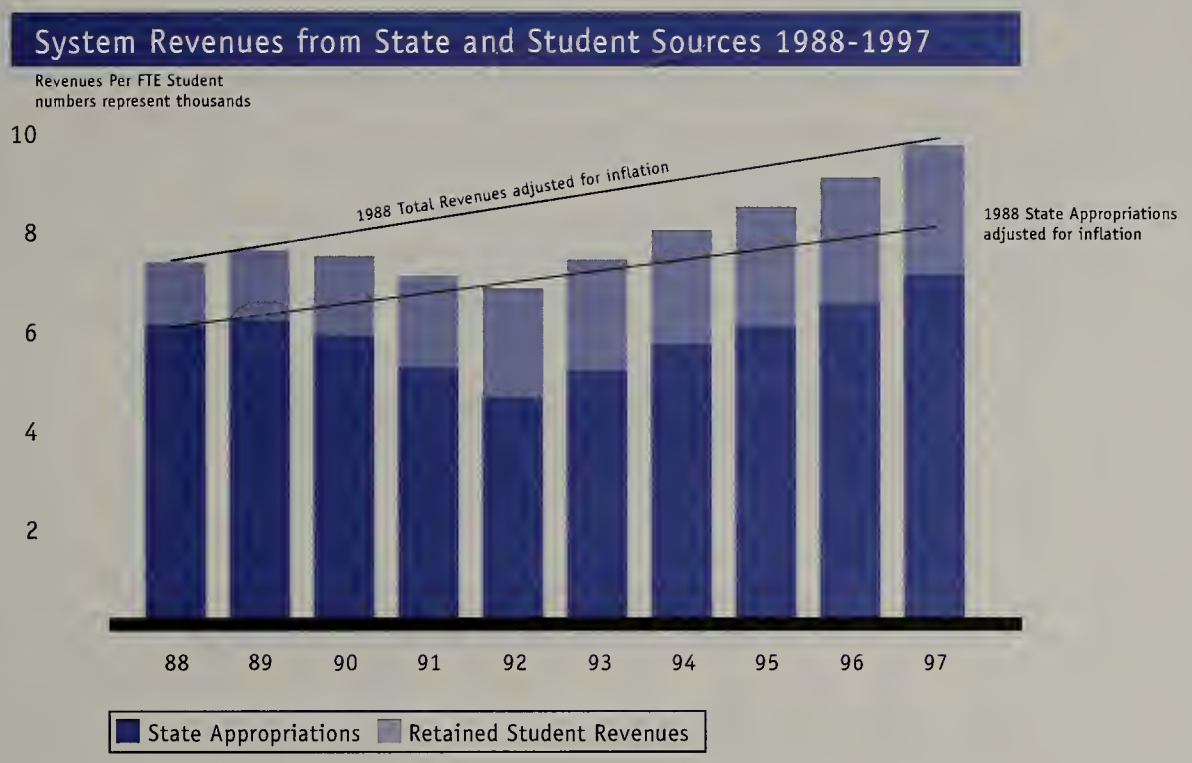
- **Even though state effort is comparatively low, due to an above average tax base, state support per student is moderate in relation to other states.** In 1995-1996, Massachusetts ranked 34th in dollars appropriated per student.

State Budget Summary

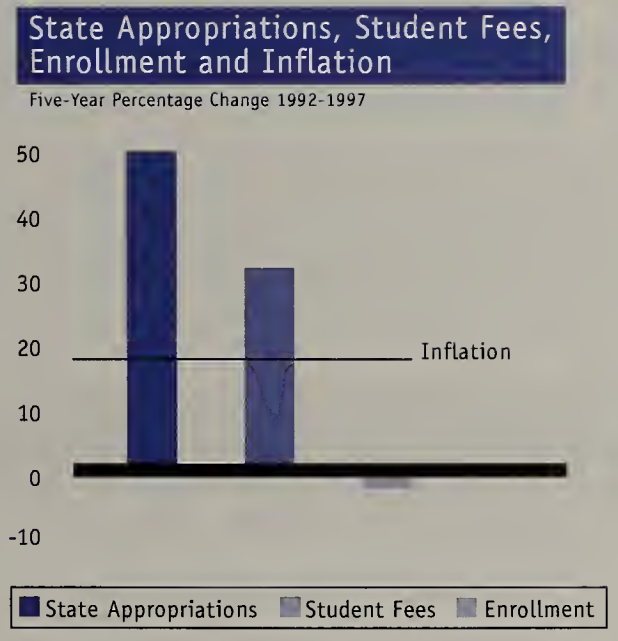


* Other includes local government support, economic development, central costs, and other costs.

- **In fiscal year 1988, the state appropriated 6.5% of available funds to higher education. For fiscal year 1997, Massachusetts appropriated 4.3% of its state budget ($802.2 million) to higher education; the national average was approximately 6.0%.** If 1997 appropriations to higher education were 6.0% of the state budget, total state support would exceed $1.1 billion.



- **Total fiscal year 1997 institutional revenues per student are approximately equal to fiscal year 1988 revenues per student adjusted for inflation.** However, the percentage of revenues from student charges in 1997 is significantly greater than in 1988.

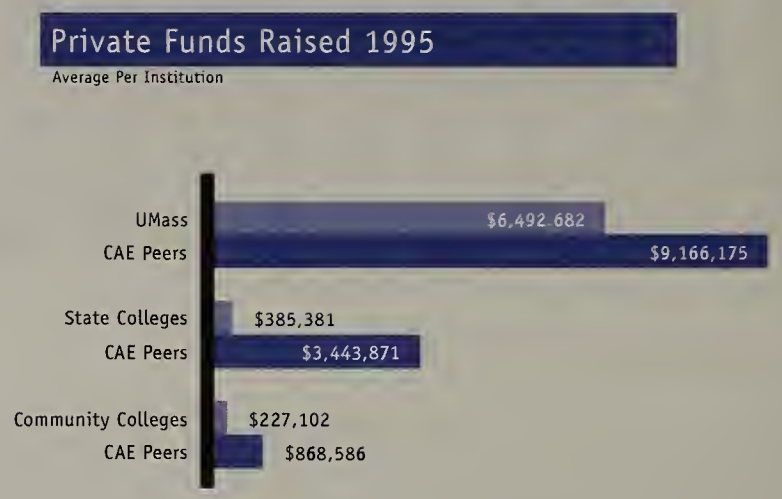


- **The trend in state spending on higher education has been upward since 1992, following a period of decline between 1988-1992.** Since 1992, state support for higher education has increased 49%, from $537.4 million to $802.2 million, while average student fees rose 31%, from $1,630 to $2,130. Over the same period, inflation was 17% and FTE student enrollment fell 3%. Since 1988, state support has increased 8%, while average student fees rose 397%. Over this period, inflation was 38% and FTE student enrollment fell 7%.

Institutional Fundraising

- **Systemwide, public campuses raised $39,466,154 in private funds in fiscal year 1995. In fiscal year 1997, endowments will exceed $116,251,425.** Nationally comparative data from the Council for Aid to Education (CAE) indicate that institutions similar to UMass raised 41% more on average in 1995 than UMass. Institutions similar to the state and community colleges raised nine times and nearly four times more, respectively, than Massachusetts public institutions.

The state Legislature has encouraged private fundraising through the $11 million Endowment Incentive Program. This program matches $1 from the Commonwealth for every $2 raised by campuses in fiscal year 1997.



For comparison purposes, UMass figure does not include Worcester campus.

- **Historically, Massachusetts public campuses have not been successful in private fundraising.** UMass Amherst and Boston, however, recently launched their first major capital campaigns. Special efforts are underway at most other public colleges as well.

- **While fiscal year 1997 is not yet over, early results indicate significant increases in fundraising.** The state colleges, for example, have raised 35% more funds eligible for matching in the first ten months of this fiscal year than they raised altogether in fiscal year 1995.

Endowments
As of June 30, 1996

	Segment Total	Average Per Institution
UMass	$84,403,135	$16,880,627
State Colleges	$10,741,584	$1,193,509
Community Colleges	$11,635,030	$775,669

Facilities

- **The Massachusetts Legislature, in 1995, authorized nearly $700 million in capital projects at public higher education institutions. Annual spending by the system, however, is capped by the Executive Office of Administration and Finance at $50 million per year for five years.** This five-year spending cap of $250 million in General-Obligation Bond support is for new construction, major renovations, compliance, and deferred maintenance projects at the campuses.

The Board of Higher Education has called upon campuses to spend annually 3% of their unrestricted operating revenues on capital adaptation and renewal, a practice already in place at some institutions. In fiscal year 1996, this would have required a minimum of $30 million in capital adaptation and renewal expenditures.

- **The system has over $300 million in legislatively authorized deferred maintenance projects.** Thus, planned spending from capital funds will not be sufficient to meet deferred maintenance needs or ongoing capital adaptation and renewal.

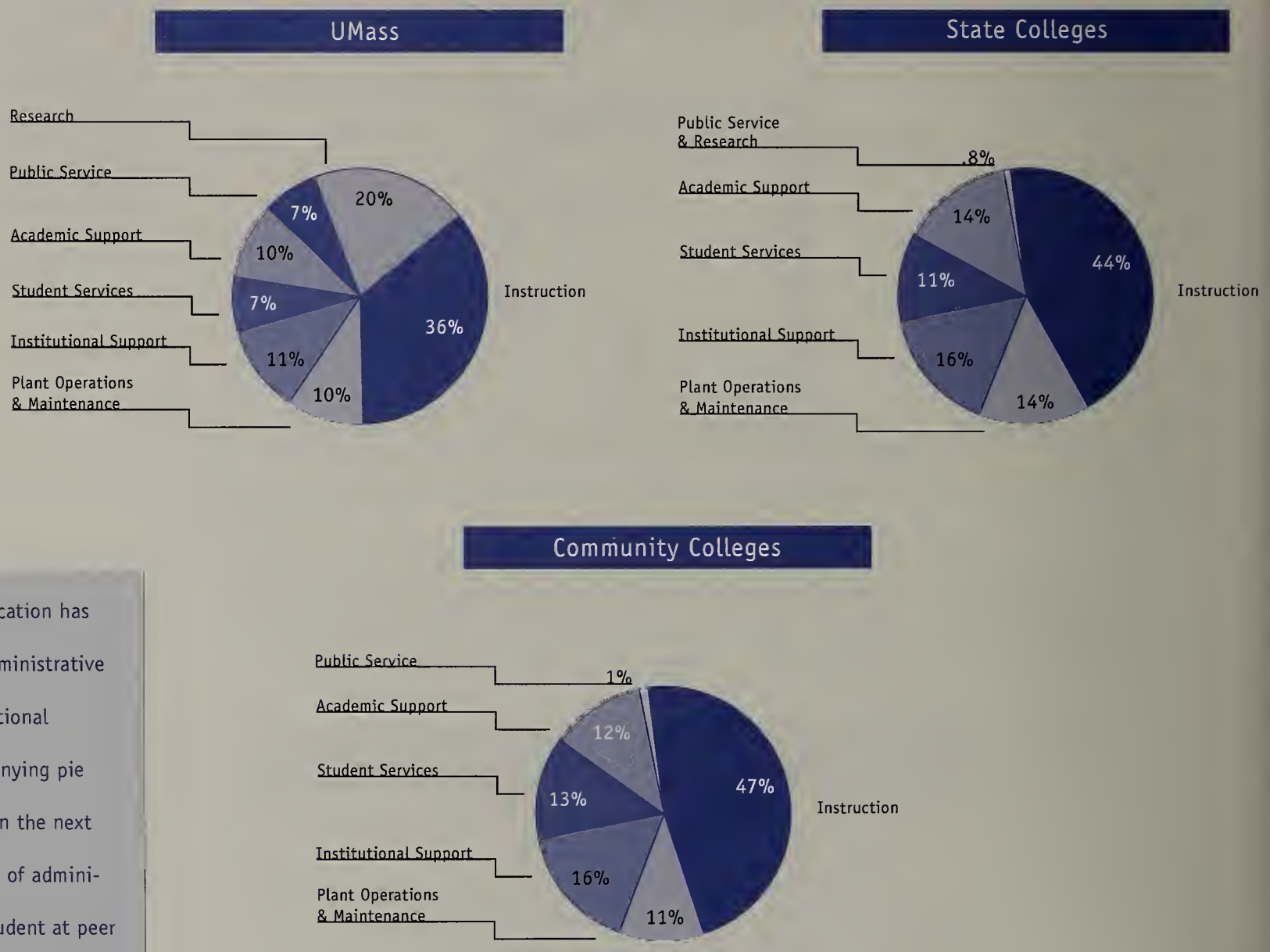
- **UMass has embarked upon a $435 million capital project.** Of that amount, one-half will be borrowed by the UMass Building Authority for priority capital needs.

Total Expenditures by Category

Institutional expenditures are reported in the following categories: instruction, research, public service, academic support, student services, institutional support, and physical plant.

1996 Institutional Expenditures

Fiscal Year Operating Budgets
Excluding Clinical Operations, Auxiliary Enterprises, and Financial Aid



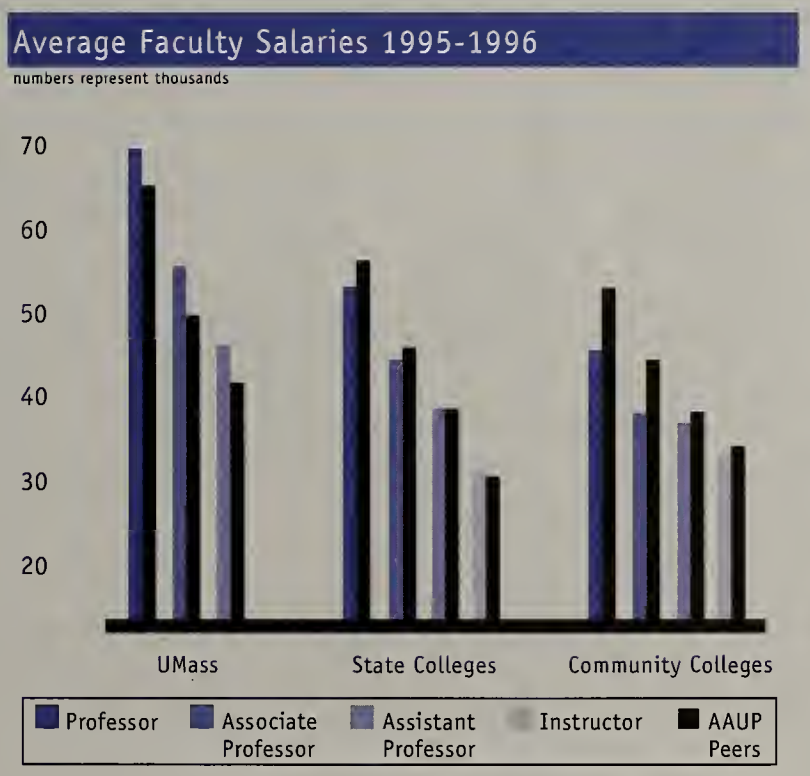
The Board of Higher Education has directed that campus administrative costs (shown as "institutional support" in the accompanying pie charts) be reduced within the next two years to within 10% of administrative costs per FTE student at peer institutions. Funds will be reallocated to instruction, student services, and facilities maintenance and improvement.

- **Instruction is the area of greatest institutional expense.** Instruction accounts for approximately 40% of total expenditures throughout the system, followed by institutional support at 13%, and research, academic support, and plant operations and maintenance, all at 11% of total expenditures.

Faculty

- **There are approximately 7,000 faculty members teaching on the public campuses.** The ratio of students to faculty throughout the system is approximately 17 to 1. (Number of faculty includes those paid with state funds as well as those supported by non-state sources.)

- **On average, the community colleges have the fewest students per faculty member, with a ratio of roughly 14 to 1. The UMass and state college ratio is approximately 18 to 1.** It is appropriate that community colleges have more faculty members relative to students, given the greater attention to developmental education that often is needed by community college students.



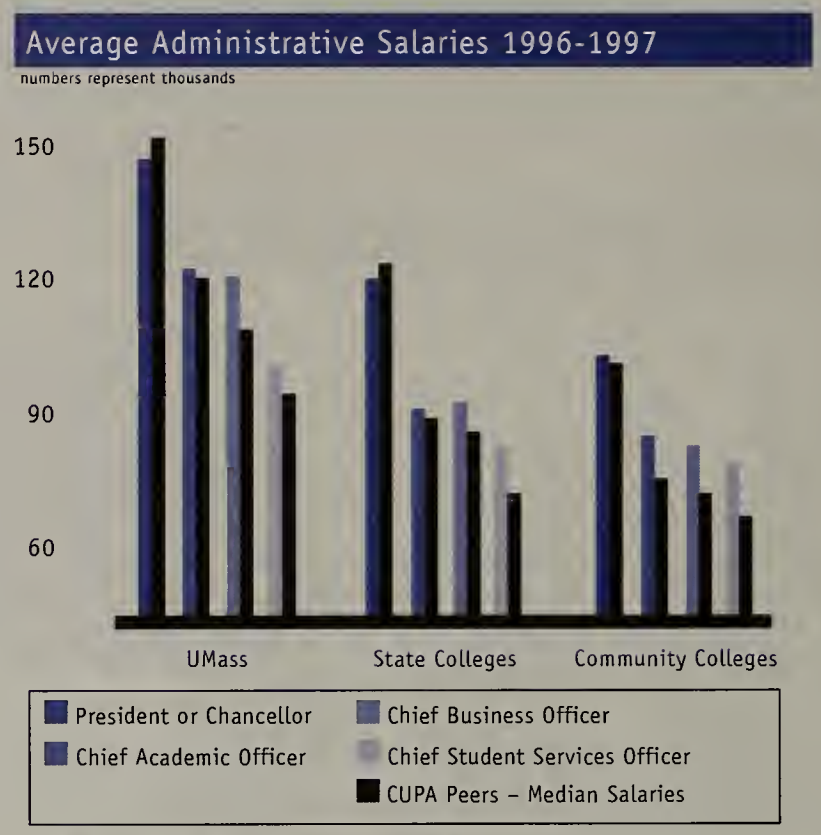
Collective bargaining agreements raised average faculty salaries by 3.5% for 1996-97, and, retroactively, by 2.5% for 1995-96. Faculty received no raises for the two previous years. Prior to renegotiation of contracts in 1998, the Board will examine faculty workloads and compensation compared with peer institutions.

- **On average, UMass and state college faculty salaries are competitive with faculty salaries at similar institutions nationwide.** According to the American Association of University Professors (AAUP), UMass faculty at all levels are paid more than their AAUP peers. Massachusetts state and community college faculty are paid less than AAUP peers at all levels other than state college assistant professors and instructors, who earn slightly more than the national AAUP average. Faculty fringe benefits compare favorably with those of AAUP peers.

Administrators

- Presidential salaries are competitive with presidents' salaries at similar institutions nationwide, based upon College and University Personnel Association (CUPA) data.
- Chief academic, business, and student services officers earn on average more than those at similar institutions nationwide.

In January 1996, the Board of Higher Education delegated authority to local boards of trustees of the state and community colleges to set presidential compensation consistent with their related duties to hire, evaluate and dismiss presidents.



For comparison purposes, UMass figure does not include Worcester campus.

Stabilizing Costs

The Board of Higher Education has taken the following actions aimed at stabilizing the cost of education:

- Reduced tuition on all campuses between 5% and 10% for the academic year 1996-97, and by an additional 5% for 1997-98. The Board of Higher Education also has recommended that the campuses make similar reductions in student fees.

- Directed that campus administrative costs be reduced, within the next two years, to within 10% of the average administrative costs per FTE student at peer institutions.

- Required four-year campuses to charge resident students the full cost of education for credits taken in excess of 118% of the number required to earn the bachelor's degree.

- Established a program productivity review that requires campuses to eliminate, or provide a compelling reason for retaining, academic programs that have fewer than a minimum threshold of graduates per year for a period of three years. This will reduce expenditures on underutilized resources.

- Required campuses to eliminate an existing program when proposing a new academic program. The program being eliminated must have resources comparable to the program being requested.

- Limited the amount of remedial education offered at UMass and the state colleges, encouraging students who require remedial courses to enroll at the less-costly community colleges.

- Raised admissions standards at UMass and the state colleges. The effect of this policy, the Joint Admissions program, and the Tuition Advantage Program should be an increase in community college enrollment, where costs are lower for the Commonwealth and students.

- Established, with the Legislature, the Endowment Incentive Program, which matches every $2.00 raised from private sources by the campuses with $1.00 from the Commonwealth.

- Awarded $3.8 million in Campus Performance Improvement Program Grants in fiscal year 1997, supporting efforts to increase productivity and efficiency in the operation of campuses to the benefit of students and taxpayers.

For additional copies please contact:

The Massachusetts Board of Higher Education
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Boston, Massachusetts 02108
(617) 727-7785

Massachusetts Public Colleges and the University of Massachusetts

Community Colleges

1. Berkshire Community College
2. Bristol Community College
3. Bunker Hill Community College
4. Cape Cod Community College
5. Greenfield Community College
6. Holyoke Community College
7. Massachusetts Bay Community College
8. Massasoit Community College
9. Middlesex Community College
10. Mount Wachusett Community College
11. North Shore Community College
12. Northern Essex Community College
13. Quinsigamond Community College
14. Roxbury Community College
15. Springfield Technical Community College

State Colleges

16. Bridgewater State College
17. Fitchburg State College
18. Framingham State College
19. Massachusetts College of Art
20. Massachusetts Maritime Academy
21. North Adams State College
22. Salem State College
23. Westfield State College
24. Worcester State College

University of Massachusetts

25. University of Massachusetts Amherst
26. University of Massachusetts Boston
27. University of Massachusetts Dartmouth
28. University of Massachusetts Lowell
29. University of Massachusetts Medical Center

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